



SPECIFIC NOTES:

- Length of speed change lanes and recovery area to be increased if grades are equal to or exceed 3%. See Exhibit 10-71 from the 2004 AASHTO book entitled "A Policy On Geometric Design Of Highways And Streets".
- On curved mainline roadways with flat curvature, use a horizontal curve to approximate the taper rate. See Exhibit 10-74 from the 2004 AASHTO entitled "A Policy on Geometric Design of Highways and Streets".
- Horizontal curves are used instead of deceleration tapers when a lane is dropped.
- 1200' minimum if the ramp and freeway will frequently carry traffic volumes approximately equal to the design capacity of the merging area.

GENERAL NOTES:

- Minimum ramp length for diagonal ramps is 1000' measured from physical gore to crossroad and 1200' minimum for ramps near capacity.
- A minimum 200' platform along the ramp is required so the ramp vertical alignment approximates the mainline alignment. The platform is measured from the physical nose.
- Refer to Exhibit 3-27 from the 2004 AASHTO book entitled "A Policy on Geometric Design of Highways and Streets" for ramp superelevation rates.
- The mainline design speed should not be less than the anticipated operating speed.
- Where decision sight distance cannot be provided at exits, contact the Design Development Engineer for guidance.
- The minimum entrance/exit curve radii must be increased if the mainline cross-slope is less than 2.5%. The maximum cross slope break from mainline to ramp curve must not exceed 5%.

Minimum Conditions Table

Condition	Design Speeds (mph)				Deceleration Length (ft)	Exit Curve Radius (ft)	Escape Rate	Transition Rate	Deceleration Rate
	Mainline	Ramp Gore	Ramp Proper	Loop Diagonal					
A	70	50	25	50 min	340	1050	35:1	25:1	20:1
B	60	45 *	25	45 min	300	850	30:1	22.5:1	17:1
C	50	35	25	35 min	285	500	25:1	17.5:1	14:1

* Rounded upward